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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,446	Applicant(s) AIGNER ET AL.	
	Examiner Qing Chen	Art Unit 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2191

DETAILED ACTION

1. This is the initial Office action based on the application filed on October 12, 2006.
2. **Claims 1-16** are pending.

Claim Objections

3. **Claim 5** is objected to because of the following informalities:
 - Claim 5 contains a typographical error: “The computer-implemented framework according of claim 4” should presumably read -- The computer-implemented framework of claim 4 --.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. **Claims 1-16** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 is directed to a computer-implemented framework. However, the recited components of the framework appear to lack the necessary physical components (hardware) to constitute a machine or manufacture under § 101. The recited components of the framework can be construed to cover software under the broadest reasonable interpretation. Furthermore,

Art Unit: 2191

although the claim recites that the framework is computer-implemented, however, such recitation can be interpreted as an intended execution environment for the framework. The claim does not provide any clarification on how a computer is structurally and functionally interrelated to the framework. Therefore, the claimed software product testing system is ineligible subject matter under § 101.

Claims 2-8 depend on Claim 1 and do not cure the deficiency of Claim 1. Therefore, Claims 2-8 are rejected for the same reason set forth in the rejection of Claim 1.

Claim 9 is directed to a computer-implemented method. However, the claim does not explicitly recite or inherently require a particular machine for performing the recited steps of “accessing,” “modeling,” and “enabling.” The recited steps of the method could be manually performed under the broadest reasonable interpretation. Furthermore, although the claim recites that the method is computer-implemented, however, such recitation can be interpreted as an intended execution environment for the method. The claim does not provide any clarification on how a computer is structurally and functionally interrelated to the framework for performing the method. Therefore, the claimed method is ineligible subject matter under § 101.

Claims 10-16 depend on Claim 9 and do not cure the deficiency of Claim 9. Therefore, Claims 10-16 are rejected for the same reason set forth in the rejection of Claim 9.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2191

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,789,252 (hereinafter “Burke”) in view of US 6,199,195 (hereinafter “Goodwin”).

As per Claim 1, Burke discloses:

A computer-implemented framework (col. 15 lines 34-36, “... an open and extensible object definition framework ...”) **for a composite application** (col. 15 lines 51-54, “... assembled software application forms [composite application].”), **the framework comprising:**

- **an object access layer to exchange data with enterprise base systems** (col. 34 lines 25-29, “The integration framework enables the business object definition system to receive and distribute [exchange] data to create a seamless gateway between the business object definition system and existing enterprise systems.”) **and to present the data to a composite application through a uniform interface** (col. 34 lines 45-48, “Order, product, process and customer data collected and created by the Business Object Definition System is distributed [presented] by outbound gateways [uniform interface] to existing enterprise applications [composite application].”);

- **a business object modeling layer comprising a business object modeler to provide a user interface (UI) for constructing a business object** (col. 25 lines 6-18, “The Enterprise Explorer software component [business object modeler] allows a user to all

Art Unit: 2191

definitional content of an object from one user interface ... The user can also execute the following functions against the selected component: Create [construct] ...”); **and**

- **a service layer to enable services to the composite application** (col. 37 lines 45-57, “When applied to a specific object environment, the business object definition system will be embodied in one of its assembled application forms [composite application] ... Other applications include: Collaborative Design, Managed Negotiation, Engineering Data Control, Product Catalog and Process Directories, Inventory Systems, Material Pedigree Systems, Knowledgebase Management, and any Demand Management System including Purchasing and Order Management [services].”), **the service layer comprising a collaboration services module to enable collaboration services to the composite application** (col. 52 lines 50-63, “A Collaborative Design System [collaboration services module] can be assembled using the business object definition system components in accordance with the invention. Such a Collaborative Design System will allow multiple parties participate in the design and specification of a business object ... Design content can be revision controlled [collaboration services] ...”).

Burke discloses **at least one of the collaboration services** but does not explicitly disclose:

- **the business object modeling layer linking at least one of the collaboration services associated with the business object to the business object.**

However, Goodwin discloses:

- **a business object modeling layer linking at least one of services associated with a business object to the business object** (col. 6 lines 48-51, “The unified models 206 together

Art Unit: 2191

comprise a repository that manages object schema (i.e., the unified models 206) and their links to enterprises resources, such as databases and world wide web sites.”). [Examiner’s Remarks: Note that enterprise resources, such as databases and world wide web sites, provide services to an business object.]

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Goodwin into the teaching of Burke to include the business object modeling layer linking at least one of the collaboration services associated with the business object to the business object. The modification would be obvious because one of ordinary skill in the art would be motivated to associate a collaboration service with a business object so that the business object can reference the collaboration service directly.

As per Claim 2, the rejection of Claim 1 is incorporated; and Burke further discloses:

- **wherein the collaboration services module enables at least one generic collaboration service** (col. 52 lines 50-63, “A Collaborative Design System [collaboration services module] can be assembled using the business object definition system components in accordance with the invention. Such a Collaborative Design System will allow multiple parties participate in the design and specification [at least one generic collaboration service] of a business object ...”).

As per Claim 3, the rejection of Claim 2 is incorporated; and Burke further discloses:

- **wherein the object modeling layer comprises a module to derive at least one object specific service from the at least one generic collaboration service** (col. 25 lines 6-13,

Art Unit: 2191

“The Enterprise Explorer software component [module] allows a user to all definitional content of an object from one user interface. The user can selectively view the object's revision [at least one object specific service] ... The user can execute the following revision actions against the selected component ...”; col. 52 lines 50-63, “A Collaborative Design System can be assembled using the business object definition system components in accordance with the invention. Such a Collaborative Design System will allow multiple parties participate in the design and specification [at least one generic collaboration service] of a business object ... Design content can be revision controlled ...”).

As per Claim 4, the rejection of Claim 3 is incorporated; and Burke further discloses:

- **a process modeler including a context modeler for modeling a context** (col. 19 lines 6-12, “... Explorer or Instance Editor [context modeler] transactions (discussed below) to create machine processable, application independent, model definitions that capture knowledge [modeling a context] as reusable chunks that become the patterns for all object definition/specification instances needed in the business.”), **wherein the object modeling layer comprises a module arranged to derive an object specific service from the at least one generic collaboration service on the basis of the modeled context** (col. 18 lines 66 and 67 to col. 19 lines 1-3, “As discussed above, these templates are known as "models". Models are business objects that take the form of revision-controlled specifications [modeled context].”; col. 25 lines 6-13, “The Enterprise Explorer software component [module] allows a user to all definitional content of an object from one user interface. The user can selectively view the object's revision [object specific service] ... The user can execute the following revision actions

Art Unit: 2191

against the selected component ...”; col. 52 lines 50-63, “A Collaborative Design System can be assembled using the business object definition system components in accordance with the invention. Such a Collaborative Design System will allow multiple parties participate in the design and specification [at least one generic collaboration service] of a business object ... Design content can be revision controlled ...”).

As per Claim 5, the rejection of Claim 4 is incorporated; and Burke discloses **a generic collaboration service and at least one generic collaboration service** but does not explicitly disclose:

- **wherein each business object is a specific instance of an object class, and wherein the object modeling layer comprises a module to extend the object class by adding a generic collaboration service and to derive an object class specific service from the at least one generic collaboration service.**

However, Goodwin discloses:

- **each business object is a specific instance of an object class** (col. 4 lines 6 and 7, “An "object instance" is an embodiment (instantiation) of an object class.”), **and an object modeling layer comprises a module to extend the object class by adding a generic service and to derive an object class specific service from the at least one generic service** (col. 4 lines 64-67 to col. 5 lines 1-10, “"Inheritance" represents a specialization of an object class in which the specialized class shares [derives] all of the attributes and routines of parent classes ... Inheritance can extend across many object class "generations." For example, the object class "drug treatments" can inherit from the object class "patient" (emphasis added) ...”; col. 6 lines

Art Unit: 2191

29-32, "The disclosed system and method allow object developers to design and author [add] new object services, and to define how these services are composed within extensible frameworks with other object services."'). [Examiner's Remarks: Note that when a child class inherits from a parent class, the specific service routines of the child class are extended from the generic service routines of the parent class.]

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Goodwin into the teaching of Burke to include wherein each business object is a specific instance of an object class, and wherein the object modeling layer comprises a module to extend the object class by adding a generic collaboration service and to derive an object class specific service from the at least one generic collaboration service. The modification would be obvious because one of ordinary skill in the art would be motivated to reuse code which already exists in a parent in a way that collaboration services provided by the parent class can be extended to a child class.

As per Claim 6, the rejection of Claim 5 is incorporated; and Burke discloses **at least one generic collaboration service** but does not explicitly disclose:

- **wherein the object modeling layer specializes the at least one generic collaboration service in accordance with the object class.**

However, Goodwin discloses:

- **an object modeling layer specializes at least one generic service in accordance with an object class** (col. 4 lines 64-67 to col. 5 lines 1-10, "'Inheritance" represents a specialization of an object class in which the specialized class shares all of the attributes and

Art Unit: 2191

routines of parent classes ... Inheritance can extend across many object class "generations." For example, the object class "drug treatments" can inherit from the object class "patient" ..."; col. 6 lines 29-32, "The disclosed system and method allow object developers to design and author new object services, and to define [specialize] how these services are composed within extensible frameworks with other object services.").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Goodwin into the teaching of Burke to include wherein the object modeling layer specializes the at least one generic collaboration service in accordance with the object class. The modification would be obvious because one of ordinary skill in the art would be motivated to reuse code which already exists in a parent in a way that collaboration services provided by the parent class can be extended to a child class specifically for its use.

As per Claim 7, the rejection of Claim 1 is incorporated; and Burke further discloses:

- **wherein the object modeling layer is included in a design time component** (col. 25 lines 6-8, "The Enterprise Explorer software component [design time component] allows a user to all definitional content of an object from one user interface.").

As per Claim 8, the rejection of Claim 1 is incorporated; and Burke further discloses:

- **a user interface (UI) layer to enable UI patterns that facilitate information exchange between the composite application and a user** (col. 25 lines 6-18, "The Enterprise Explorer software component [UI patterns] allows a user to all definitional content of an object

Art Unit: 2191

from one user interface [user interface (UI) layer] ... The user can also execute the following functions against the selected component: Create, Clone, Compose, Compare, Applicability Determination, Capability Assessment, Derive, Renew and Delete.”).

As per Claim 9, Burke discloses:

A computer-implemented method of implementing a composite application in a framework (col. 1 lines 26-32, “... method ... for creating and applying dynamically defined business objects used in such computer systems [framework], for using such business objects to configure business software applications [composite application] ...”), **the method comprising:**

- **accessing an object to exchange data with enterprise base systems** (col. 34 lines 25-36, “The integration framework enables the business object definition system to receive and distribute [exchange] data to create a seamless gateway between the business object definition system and existing enterprise systems ... Once configured, the integration framework provides a flexible connection [accessing] between the business object definition system and the user's existing enterprise applications.”) **and to present the data to a composite application through a uniform interface** (col. 34 lines 45-48, “Order, product, process and customer data collected and created by the Business Object Definition System is distributed [presented] by outbound gateways [uniform interface] to existing enterprise applications [composite application].”);

- **modeling a business object to enable a user interface (UI) for constructing a business object** (col. 19 lines 6-12, “... Explorer or Instance Editor transactions (discussed below) to create machine processable, application independent, model definitions that capture knowledge as reusable chunks that become the patterns for all object definition/specification”);

Art Unit: 2191

instances needed in the business (emphasis added).”; col. 25 lines 6-18, “The Enterprise Explorer software component allows a user to all definitional content of an object from one user interface ... The user can also execute the following functions against the selected component: Create [construct] ...”); **and**

- **enabling services to the composite application including providing collaboration services to the composite application** (col. 37 lines 45-57, “When applied to a specific object environment, the business object definition system will be embodied in one of its assembled application forms [composite application] ... Other applications include: Collaborative Design, Managed Negotiation, Engineering Data Control, Product Catalog and Process Directories, Inventory Systems, Material Pedigree Systems, Knowledgebase Management, and any Demand Management System including Purchasing and Order Management [services].”; col. 52 lines 50-63, “A Collaborative Design System can be assembled [enabled] using the business object definition system components in accordance with the invention. Such a Collaborative Design System will allow multiple parties participate in the design and specification of a business object ... Design content can be revision controlled [collaboration services] ...”).

Burke discloses **at least one of the collaboration services** but does not explicitly disclose:

- **the modeling comprises directly linking at least one of the collaboration services associated with the business object to the business object.**

However, Goodwin discloses:

- **modeling comprises directly linking at least one of services associated with an business object to the business object** (col. 6 lines 48-51, “The unified models 206 together

Art Unit: 2191

comprise a repository that manages object schema (i.e., the unified models 206) and their links to enterprises resources, such as databases and world wide web sites.”). [Examiner’s Remarks: Note that enterprise resources, such as databases and world wide web sites, provide services to an business object.]

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Goodwin into the teaching of Burke to include the modeling comprises directly linking at least one of the collaboration services associated with the business object to the business object. The modification would be obvious because one of ordinary skill in the art would be motivated to associate a collaboration service with a business object so that the business object can reference the collaboration service directly.

As per Claim 10, the rejection of Claim 9 is incorporated; and Burke further discloses:

- **wherein providing the collaboration services comprises enabling at least one generic collaboration service** (col. 52 lines 50-63, “A Collaborative Design System can be assembled [enabled] using the business object definition system components in accordance with the invention. Such a Collaborative Design System will allow multiple parties participate in the design and specification [at least one generic collaboration service] of a business object ...”).

As per Claim 11, the rejection of Claim 10 is incorporated; and Burke further discloses:

- **wherein modeling comprises deriving at least one object specific service from the at least one generic collaboration service** (col. 25 lines 6-13, “The Enterprise Explorer software component allows a user to all definitional content of an object [deriving] from one user

Art Unit: 2191

interface. The user can selectively view the object's revision [at least one object specific service] ... The user can execute the following revision actions against the selected component ...”; col. 52 lines 50-63, “A Collaborative Design System can be assembled using the business object definition system components in accordance with the invention. Such a Collaborative Design System will allow multiple parties participate in the design and specification [at least one generic collaboration service] of a business object ... Design content can be revision controlled ...”).

As per Claim 12, the rejection of Claim 11 is incorporated; and Burke further discloses:

- **modeling a process including a context** (col. 19 lines 6-12, “... Explorer or Instance Editor transactions (discussed below) to create machine processable, application independent, model definitions that capture knowledge [context] as reusable chunks that become the patterns for all object definition/specification instances needed in the business (emphasis added).”), **the modeling comprising deriving an object specific service from the at least one generic collaboration service on the basis of the modeled context** (col. 18 lines 66 and 67 to col. 19 lines 1-3, “As discussed above, these templates are known as "models". Models are business objects that take the form of revision-controlled specifications [modeled context].”; col. 25 lines 6-13, “The Enterprise Explorer software component allows a user to all definitional content of an object [deriving] from one user interface. The user can selectively view the object's revision [object specific service] ... The user can execute the following revision actions against the selected component ...”; col. 52 lines 50-63, “A Collaborative Design System can be assembled using the business object definition system components in accordance with the invention. Such a Collaborative Design System will allow multiple parties participate in the design and

Art Unit: 2191

specification [at least one generic collaboration service] of a business object ... Design content can be revision controlled ...”).

As per Claim 13, the rejection of Claim 12 is incorporated; and Burke discloses **a generic collaboration service and at least one generic collaboration service** but does not explicitly disclose:

- **wherein each business object is a specific instance of an object class, and wherein modeling comprises extending the object class by adding a generic collaboration service and deriving an object class specific service from the at least one generic collaboration service.**

However, Goodwin discloses:

- **each business object is a specific instance of an object class** (col. 4 lines 6 and 7, “An “object instance” is an embodiment (instantiation) of an object class.”), **and modeling comprises extending the object class by adding a generic service and deriving an object class specific service from the at least one generic service** (col. 4 lines 64-67 to col. 5 lines 1-10, ““Inheritance” represents a specialization of an object class in which the specialized class shares [derives] all of the attributes and routines of parent classes ... Inheritance can extend across many object class “generations.” For example, the object class “drug treatments” can inherit from the object class “patient” (emphasis added) ...”; col. 6 lines 29-32, “The disclosed system and method allow object developers to design and author [add] new object services, and to define how these services are composed within extensible frameworks with other object services.”). [Examiner’s Remarks: Note that when a child class inherits from a parent class, the

Art Unit: 2191

specific service routines of the child class are extended from the generic service routines of the parent class.]

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Goodwin into the teaching of Burke to include wherein each business object is a specific instance of an object class, and wherein modeling comprises extending the object class by adding a generic collaboration service and deriving an object class specific service from the at least one generic collaboration service. The modification would be obvious because one of ordinary skill in the art would be motivated to reuse code which already exists in a parent in a way that collaboration services provided by the parent class can be extended to a child class.

As per Claim 14, the rejection of Claim 13 is incorporated; and Burke discloses **at least one generic collaboration service** but does not explicitly disclose:

- **wherein modeling comprises specializing the at least one generic collaboration service in accordance with the object class.**

However, Goodwin discloses:

- **modeling comprises specializes at least one generic service in accordance with an object class** (col. 4 lines 64-67 to col. 5 lines 1-10, ““Inheritance” represents a specialization of an object class in which the specialized class shares all of the attributes and routines of parent classes ... Inheritance can extend across many object class “generations.” For example, the object class “drug treatments” can inherit from the object class “patient” ...”; col. 6 lines 29-32, “The disclosed system and method allow object developers to design and author new object

Art Unit: 2191

services, and to define [specialize] how these services are composed within extensible frameworks with other object services.”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Goodwin into the teaching of Burke to include wherein modeling comprises specializing the at least one generic collaboration service in accordance with the object class. The modification would be obvious because one of ordinary skill in the art would be motivated to reuse code which already exists in a parent in a way that collaboration services provided by the parent class can be extended to a child class specifically for its use.

As per Claim 15, the rejection of Claim 14 is incorporated; and Burke further discloses:

- **wherein the modeling is carried out by a design time component** (col. 25 lines 6-8, “The Enterprise Explorer software component [design time component] allows a user to all definitional content of an object from one user interface.”).

As per Claim 16, the rejection of Claim 15 is incorporated; and Burke further discloses:

- **enabling a UI layer to provide UI patterns that facilitate information exchange between the composite application and a user** (col. 25 lines 6-18, “The Enterprise Explorer software component [UI patterns] allows [enables] a user to all definitional content of an object from one user interface [UI layer] ... The user can also execute the following functions against the selected component: Create, Clone, Compose, Compare, Applicability Determination, Capability Assessment, Derive, Renew and Delete.”).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Q. C./

Examiner, Art Unit 2191

/Anna Deng/

Primary Examiner, Art Unit 2191